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The promise of multimedia learning: using the same instructional design methods across different media

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Abstract

Multimedia learning occurs when students build mental representations from words and pictures that are presented to them (e.g., printed text and illustrations or narration and animation). The promise of multimedia learning is that students can learn more deeply from well-designed multimedia messages consisting of words and pictures than from more traditional modes of communication involving words alone. This article explores a program of research aimed at determining (a) research-based principles for the design of multimedia explanationsâ€”which can be called methods, and (b) the extent to which methods are effective across different learning environmentsâ€”which can be called media. A review of research on the design of multimedia explanations conducted in our lab at Santa Barbara shows (a) a multimedia effectâ€”in which students learn more deeply from words and pictures than from words aloneâ€”in both book-based and computer-

based environments, (b) a coherence effectâ€”in which students learn more deeply when extraneous material is excluded rather than includedâ€”in both book-based and computer-based environments, (c) a spatial contiguity effectâ€”in which students learn more deeply when printed words are placed near rather than far from corresponding picturesâ€”in both book-based and computer-based environments, and (d) a personalization effectâ€”in which students learn more deeply when words are presented in conversational rather than formal styleâ€”both in computer-based environments containing spoken words and those using printed words. Overall, our results provide four examples in which the same instructional design methods are effective across different media.

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Keywords

Computer-based learning (CBL); Computer-based instruction (CBI); On-line training; Multimedia learning

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"texture of the waltz", etc.), and here we see that the promotion campaign spatially programs a sharp pre-industrial type of political culture, because the plot and plot are different.
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